## CLAIMS

1. A method of diagnosing a computer system after a failure comprising:

preserving the state of a first set of system resources after the failure occurs in the computer system;

accessing the computer system by utilizing a second set of system resources; and

diagnosing the failure by analyzing one or more resources from the first set of system resources.

2. The method of claim 1 further comprising:

maintaining one or more lists of the first set of system resources.

~~3.~~ 8 The method of claim 2 in which the one or more lists are linked lists.

~~4.~~ 3 The method of claim 1 in which the first set of system resources comprise processing entities.

~~5.~~ 9 The method of claim ~~4~~ 3 in which the processing entities comprise processes which are categorized into process types.

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~~6~~. The method of claim ~~5~~ in which the act of preserving the state of the first set of the system resources comprises suspending the state of one or more of the processes in the first set of system resources.

7. The method of claim 6 in which the one or more processes to suspend are suspended by being entered into an idle loop.

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~~8~~. The method of claim ~~6~~ in which the one or more processes to suspend are suspended by an operating system scheduler.

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~~9~~. The method of claim ~~6~~ in which the one or more processes to suspend are selected based upon their process type.

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~~10~~. The method of claim 1 in which the second set of system resources comprise system resources that have been set aside for diagnostic purposes.

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~~11~~. The method of claim 1 in which the second set of system resources comprises redundant hardware/software components.

20 ~~12~~. A method of diagnosing a computer system after a failure comprising:

detecting a failure on a first computer system;

implementing fail-over to a second computer system after detecting the failure on the first computer system;

preserving the state of one or more resources on the first computer system;

accessing the first computer system to diagnose the failure; and

diagnosing the failure by analyzing the one or more resources.

13. The method of claim 12 further comprising:

maintaining a redundant system component for the first computer system; and

shifting control of the redundant system component to the second computer system after the failure.

14. The method of claim 13 in which the redundant system component comprises a disk drive.

15. The method of claim 12 in which the one or more resources comprise one or more processing entities.

16. The method of claim 15 in which the one or more processing entities comprise processes.

17. The method of claim 15 in which the act of preserving the state of one or more resources on the first computer system comprises suspending the one or more processing entities.

18. The method of claim 17 in which the one or more processing entities are suspended by being entered into an idle loop.

19. The method of claim 17 in which the one or more processing entities to suspend are suspended by an operating system scheduler.

20. The method of claim 12 further comprising the act of categorizing the failure into a failure type, and in which the failure type corresponds to the choice of the one or more resources to suspend.

21. A medium readable by a processor, the medium being stored thereon a sequence of instruction which, when executed by the processor, causes the execution of a process of preserving the state of a computer system after a failure by performing:

preserving the state of a first set of system resources after the failure occurs in the computer system;

accessing the computer system by utilizing a second set of system resources; and

diagnosing the failure by analyzing one or more resources from the first set of system resources.

22. A medium readable by a processor, the medium being stored thereon a sequence of instruction which, when executed by the processor, causes the execution of a process of preserving the state of a computer system after a failure by performing:

detecting a failure on a first computer system;

implementing fail-over to a second computer system after detecting the failure on the first computer system;

preserving the state of one or more resources on the first computer system;

accessing the first computer system to diagnose the failure; and

diagnosing the failure by analyzing the one or more resources.